Specifications — MSG Series Switchers

Video

Routing

MSG0804-3, MSG0804-4, MSG0804HR-3, MSG0804HR-4
8 x 4 matrix

MSG0808-3, MSG0808-4, MSG0808HR-3, MSG0808HR-4
8 x 8 matrix

Gain ..... Unity (with 75 ohm termination)

Bandwidth

MSG0804-3, MSG0804-4, MSG0808-3, MSG0808-4
225 MHz (-3dB), fully loaded

MSG0804HR-3, MGS0804HR-4, MSG0808HR-3, MSG0808HR-4
475 MHz (-3dB), fully loaded

Differential phase error ..... 0.05º at 3.58 MHz and 4.43 MHz

Differential gain error ..... 0.1% at 3.58 MHz and 4.43 MHz

Crosstalk ..... -60dB @ 5 MHz

Switching speed ..... 50 ms (max.)

Video input

Number/signal type ..... 8 RGBHV, RGBS, RGsB, RsGsBs, component video (YUV; YP_RP_B; Y, R-Y, B-Y), S-video, composite video

Connectors ..... 8 x 5 female BNC

Nominal level ..... 1V p-p for Y of component video and S-video, and for composite video
0.7V p-p for RGB
0.3V p-p for R-Y and B-Y of component video, and for C of S-video

Minimum/maximum levels ..... Analog: 1.5V p-p with no offset at unity gain

Impedance ..... 75 ohms

Return loss ..... <-60dB @ 5 MHz

Maximum DC offset ..... (Note: min./max. levels include any DC offset)

External sync (genlock) ..... 2.0V to 5.0V p-p

Video output

Number/signal type

MSG0804-3, MSG0804-4, MSG0804HR-3, MSG0804HR-4
4 RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, composite video

MSG0808-3, MSG0808-4, MSG0808HR-3, MSG0808HR-4
8 RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, composite video

Connectors

MSG0804-3, MSG0804-4, MSG0804HR-3, MSG0804HR-4
4 x 5 female BNC

MSG0808-3, MSG0808-4, MSG0808HR-3, MSG0808HR-4
8 x 5 female BNC

Nominal level ..... 1V p-p for Y of component video and S-video, and for composite video
0.7V p-p for RGB
0.3V p-p for R-Y and B-Y of component video, and for C of S-video

Minimum/maximum levels ..... ±5V p-p to a 75 ohm load

Impedance ..... 75 ohms

Return loss ..... -45dB @ 5 MHz

DC offset ..... ±1.5mV maximum with input at 0 offset

Switching type ..... Triple-Action (RGB delay), or vertical interval (if genlocked)

Sync

Input type ..... RGBHV, RGBS, RGsB, RsGsBs

Output type ..... RGBHV, RGBS, RGsB, RsGsBs

Genlock connectors ..... 2 BNC female

Standards ..... NTSC 3.58, NTSC 4.43, PAL, SECAM

Input level	2.0V to 5.0V p-p
Output level	4.0V to 5.0V p-p, unterminated
Input impedance	510 ohms
Output impedance	75 ohms
Max input voltage	5.0V p-p
Max. propagation delay	25 ns
Max. rise/fall time	6.5 ns
Polarity	Positive or negative (follows input)

Audio (audio models only)

Routing

MSG0804-4, MSG0804HR-4
8 x 4 stereo matrix

MSG0808-4, MSG0808HR-4
8 x 8 stereo matrix

Gain	Unbalanced output: 0dB; balanced output: +6dB
Frequency response	20 Hz to 20 kHz, ±0.5dB
THD + Noise	<0.03% @ 1 kHz at nominal level
S/N	>60dB at rated maximum output
Crosstalk	<-70dB @ 1 kHz, fully loaded
Stereo channel separation	>70dB @ 1 kHz
CMRR	>45dB @ 20 Hz to 20 kHz

Audio input

Number/signal type	8 stereo, balanced/unbalanced
Connectors	(8) 3.8 mm captive screw connectors, 5 pole
Impedance	>20 kohms unbalanced, 20 kohms balanced, DC coupled
Nominal level	+2.2dBu (0.7Vrms), -60dBV (1mV), +4dBu (1.23V), 0dBu (0.775V), -10dBV (316mV), -20dBV (100mV)
Maximum level	+12dBu, (balanced or unbalanced) at 1%THD+N
Input gain adjustment	–64dB to +0dB, adjustable per input

Audio output

Number/signal type

MSG0804-4, MSG0804HR-4
4 stereo, balanced/unbalanced, line level

MSG0808-4, MSG0808HR-4
8 stereo, balanced/unbalanced, line level

Connectors

MSG0804-4, MSG0804HR-4
(4) 3.8 mm captive screw connectors, 5 pole

MSG0808-4, MSG0808HR-4
(8) 3.8 mm captive screw connectors, 5 pole

Impedance	50 ohms unbalanced, 100 ohms balanced
Gain error	±0.4dB channel to channel
Maximum level (Hi-Z)	>+24dBu, balanced; >+18dBu, unbalanced at stated %THD+N
Maximum level (600 ohm)	>+20dBm, balanced or unbalanced at stated %THD+N

NOTE *0dBu = 0.775 volts (RMS).*

Control/remote — switcher

Serial control ports	RS-232, RS-422, RS-485 on a 3.8 mm captive screw connector, 5 pole
Baud rate and protocol	1200/2400/4800/ 9600/19200/38400 baud (default: 9600 baud, 8-bit, 1 stop bit, no parity, no flow control)

Specifications — MSG Series Matrix Switchers (continued)

Serial control pin configurations	RS-232: 2 = TX, 3 = RX, 5 = Gnd RS-422/RS-485: 2 = TX+, 6 = TX-, 3 = RX+, 7 = RX-, 1 and 5 = Gnd
Program control	ICS100 Control Software

General

Power	100VAC to 240VAC, 50/60 Hz, 25 watts, internal, autoswitchable
Temperature/humidity	Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing
Rack mount	Yes, with included IN9084B rack mount kit
Enclosure type	Metal
Enclosure dimensions	5.2" H x 17.0" W x 11.4" D (3U high, full rack width) 13.2 cm H x 43.2 cm W x 29.0 cm D (Depth excludes connectors and knobs. Width excludes rack ears.)
Product weight	12.3 lbs (5.6 kg)
Shipping weight	15 lbs (6.8 kg)
DIM weight	
USA/Canada	22 lbs (10.0 kg)
International	26 lbs (11.8 kg)
Vibration	ISTA/NSTA 1A in carton (International Safe Transit Association)
Listings	ETL (UL1950)
Compliances	CE, FCC Class A
MTBF	30,000 hours
Warranty	3 years parts and labor

NOTE *Specifications are subject to change without notice.*

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